User Manual

Solar Power Home System

Model LB-S1/2

Contents

Ⅰ.Cautions.....

Ⅱ.System Summary.....

Ⅲ.Technique Data.....

Ⅳ.Methods of Installation .....

Ⅴ.Methods of Operation .....

Ⅵ. Maintenance .....

Ⅶ.Conservation.....

Ⅷ.Accessories List .....

Ⅸ.FAQ and Solutions .....

Ⅰ.Cautions

ⅰ.Please read this user manual carefully in order to understand correct operation methods. Please make it in safe keeper for reference later after reading

ⅱ.Before the first time of using, the system should be charged over 12hours in order to insure the battery is full.

. When connecting conductor, please pay attention to the positive and negative poles in case of short circuit.

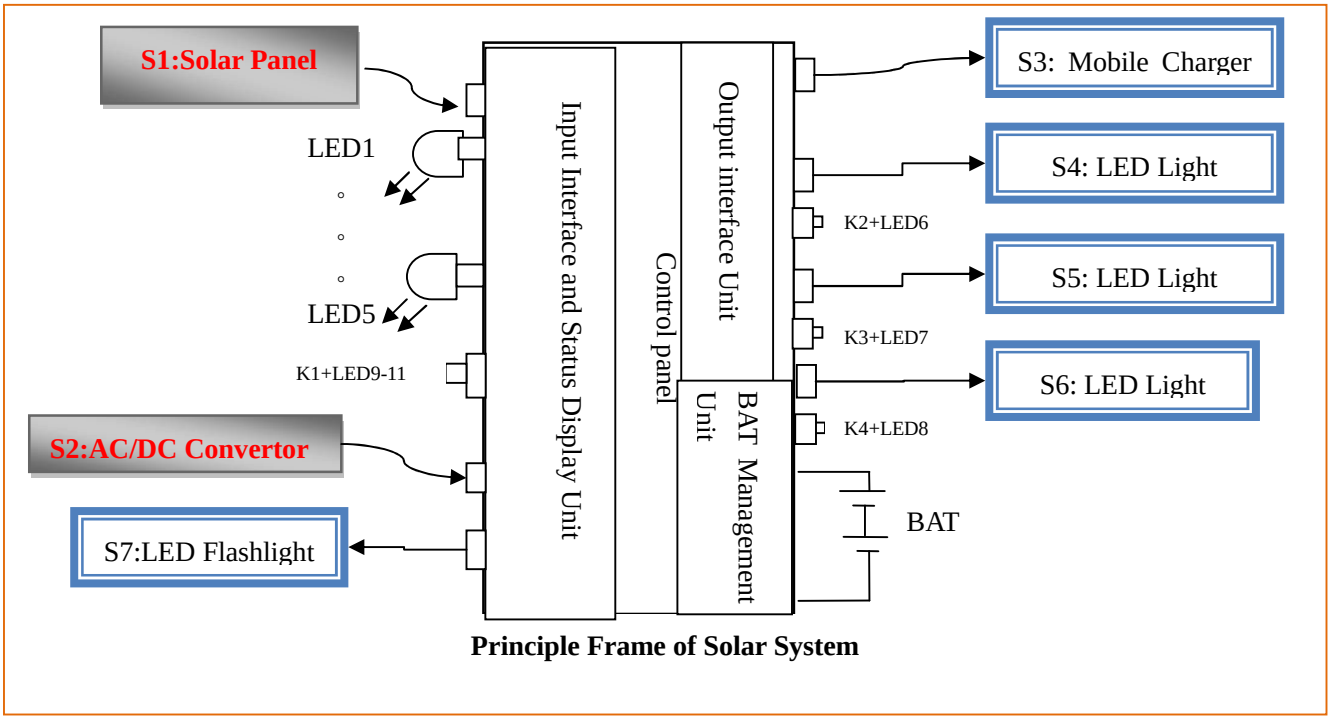
a) Before cleansing the system, close all the switches. Cleansing it with rag instead of organic substance, such as gas, thinner and so on

b) Please keep battery host far from fire source or any wiring that can cause spark easily in case the battery gets hot and explodes.

c) When the system goes wrong, please check the reason and refer to *FAQ and Solution* in this manual. Contact with us if the problem can't be excluded there.

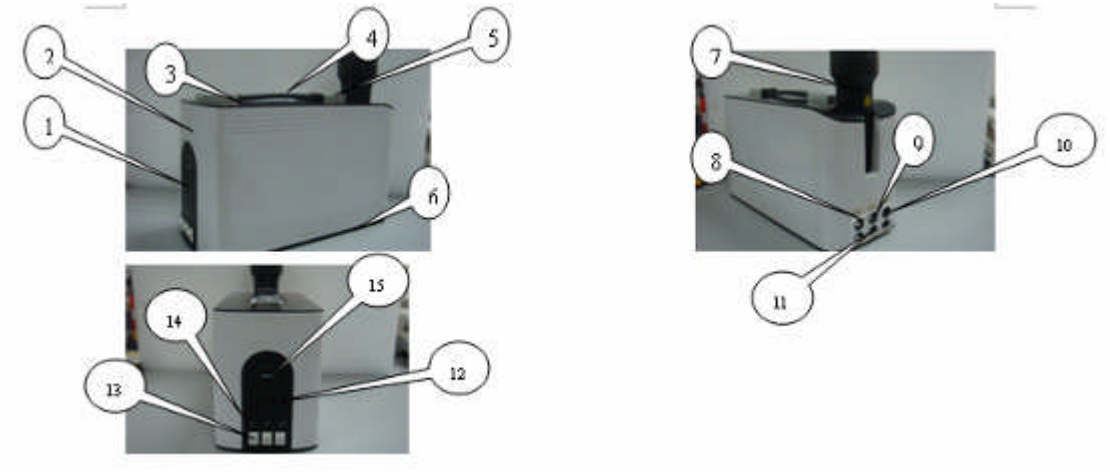
Ⅱ. System Summary

1) Principle Frame of Solar System



Principle Frame of Solar System

LB-S2 System Function Introduction



NO.	Name
1	Operation Panel
2	The Body
3	The Top
4	Carrying Handle
5	Carrying Handle Rivet
6	The Base Plate
7	LED Flashlight
8	Adapter Interface
9	Solar Panel Interface
10	Multifunctional Mobile Charger Socket (DC6V)
11	Load Output Socket (DC12V/2A)
12	Electrical Quantity Indicator
13	Load Output Control Switch
14	Load Working Indicator
15	Electrical Quantity

2) Model LB-S1/2 Performance Characteristic:

Model LB-S1/2 is elaborately designed for lighting in areas without or be short of electricity. Since the system adopts solar energy, it's environment-friendly, safe, quiet, and easy to carry and conceal. The 20W solar system can supply power to 3W (5W) high-efficient LED light for home/shop lighting as well as charging for mobile phones. It can be used more than 12 hours when the battery is full.

3) Function

3.1 Charge Management Function:

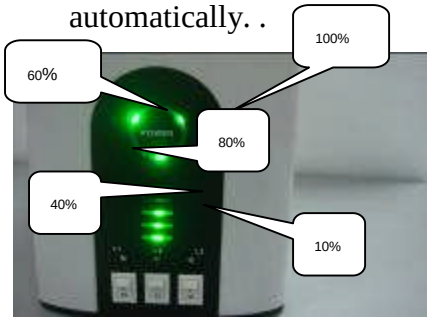
- Support charge from Solar Panel and Adaptor
- Charge Indicator：When the system is being charged, the 5 LED indicators will light one by one; when the system is full with electricity, the 5pcs LED Indicators will all light.
- Segregate charge ports in contrary direction in case that the battery discharges electricity when not being charged

3.2 Discharge Management Function:

- Support charge 4.2W LED Flashlight
- Three independent buttons control the interfaces of LED lamps; There are LED Indicators in the output terminal

3.3 Battery Capacity Indication

- 5pcs LED Indicating for Battery Electricity Capacity
- Push the button to see about battery capacity. LED Indicator will put out after 5 seconds automatically. .



Residual Capacity	LED1	LED2	LED3	LED4	LED5
100%	●	●	●	●	●
80%	●	●	●	●	
60%	●	●	●		
40%	●	●			
20%	●				
10%	●Twinkle				

3.4 Protection functions

- Overcharge Protection：15V
- Over discharge Protection：11V
- Over current protection：6A

3.5 Dormancy Function

When the system is not allowed to discharge, the power control panel can automatically stop working in order to reduce power consumption.

Ⅲ. Technical Data

Model	**LB-S1**	**LB-S2**
Battery Capacity	12V/14AH	12V/10AH
Battery Type	Maintenance Free, Lead Acid Battery	
Charging Time	Over 4 hours	Over 3 hours
Charging Current	Max 4A	
Battery Test	When battery voltage is low, panel indicator will light.	
Output Voltage	11V-13.8V	
Maximum Electricity Current	<0.005A	

Maximum Output Power	72VA
Framework	Outer Box、 Battery Host
Volume	258（L）×110（W）×160（H）
Weight	5.8KG
Color	Black and White

Ⅳ. Methods of Installation

ⅰ、Firstly, take accessories out of the carton.:

ⅱ、Fix the lights (the loads) to the wall or to the ceiling (light area).

ⅲ、Fix solar panel to a place outdoor (there is no shadow blocking out and the sunshine can reach it.) Adjust the angle of solar panel according to the local latitude.

ⅳ、Fix the battery host to indoor operation desk (it should be convenient to operate.). Keep it far from fire source, wet stuff and wiring which can easily cause spark.

□、Connect the wire of loads, solar panel with the battery separately according to icon on the host.

□、Check if every part is assembled tightly.

Remark：At the first time of using this system, it should be charged more than 12 hours to guarantee that the battery capacity is full.

Ⅴ、Methods of Operation.

1. Power on: After installation, please check if the connection of battery, solar panel, and the load is correct. When finishing check, turn on all the output switches to see about if each load works normally.
2. Charge check: When solar panel is set up correctly as above requirement and battery has not been filled yet, users will view on the operation panel that 5pcs LED Indicators is lighting repeatedly and circularly in the way of horse race lamp. Or check the battery capacity as requirement in 3.3.
3. Power off: Turn off all the output switches to check if each load stops working normally.

Ⅵ、Maintenance.

This system adopts free maintenance design. The power of output and input is automatically controlled. So it's perennial free maintenance.

1、Battery charge and discharge used perfect automated management program. It won't be over charge and discharge.

2、What users should do is just to wipe the cover with cleaning cloth to keep the system clean and beautiful.

3、As to the solar panel, users should clear away the dust or any stuff on the glass that could prevent sunshine from the panel in case of reducing solar cell's generator efficiency.

4、Please handle the system with care when using it lest should being struck by heavy object.

Ⅶ、Conservation.

The battery discharges automatically and slowly under common environment. As a result, the battery capacity will decrease slowly. In addition, the times of battery charging and discharging are limited. When you find the battery capacity can't be full no matter how you charge it, the life-span of your battery may be exhausted. At this time you should change it with a new one.

The best conservation condition of the battery is under dry environment which the temperature of 10℃~30℃. If the temperature is lower than that, the life will be reduced; if the temperature is higher than that, it will increase the speed of battery discharging and reduce its life-span. Avoid putting the battery under wet environment like the bathroom, which can easily lead to the effect of battery discharging speed increase. If the temperature is too low, it will destroy the internal chemical materials of the battery. If the temperature is too high, there may be a risk of explosion.

Remark：Please charge the battery at least once in a month in case of over discharge.

Ⅷ、Accessory List

Item	Name	Quantity	Remark
1	Battery Host	1	
2	3W LED Lamp	3	LB-S13L
3	3W LED Lamp	4	LB-S14L
4	10W DC Fan with 3-metre wire	1	LB-S13L
5	Multifunctional Mobile Charger	1	
6	LED Lamp Holder with 8-metre Wire	3	LB-S13L
7	LED Lamp Holder with 8-metre Wire	4	LB-S14L
8	Mobile Charger Connecting Wire	1	
9	Radio	1	Depending on customers' requirement
10	1.2V Rechargeable Cell	4	AAA Battery
11	LED Flashlight	1	
12	Tuning Connector	1	
13	20W Solar Panel with 8-metre Wire	1	18Vdc
14	User Manual	1	
15	Warranty Card	1	

Ⅸ. FAQ and Solution：

Questions	Reasons	Proposed Solutions
The load doesn't work; Indicators twinkle or don't light	There is something wrong with the battery.	Check the battery
	The polarity is reversed	Check the battery connection. Fuse pipe may be burned. If so, change the fuse pipe or take it to the repair shop.
	The plug is loose.	Check the plug, joint connection to see if they are reliable
	Load rated power exceeds the rated output power which causes overload and the switch shutdown.	Change the load by the ones consuming less power than rated maximum output power.
	The load is damaged.	Change the load(lamps).
	Battery capacity is exhausted.	Charge or change the battery in time.
	Inadequate ventilation causes over-temperature and the switch shutdown.	Power take off and cool down the battery host for 15 minutes. Clear surrounding stuff. Put the battery host in a cool well ventilated place and reduce the load as requirement.
	Poor contact of the plug and wire connector causes the voltage attenuation.	Check the plug, joint connection to see if they are reliable
Solar panel can’t charge the battery.	The connection wire is loose and in poor contact.	Check the connection wire and tighten the connector.
	The battery is damaged.	Replace the battery by a new one of the same model.
The system doesn’t work without indication.	The fuse pipe may be burned.	Replace the fuse pipe with a new one.